No. 751,192. PATENTED FEB. 2, 1904.

C. E. MEDING.

CLOTH TAKE-UP AND STRETCHING DEVICE.

APPLICATION FILED AUG. 30, 1899.

NO MODEL.

Fig. 1.

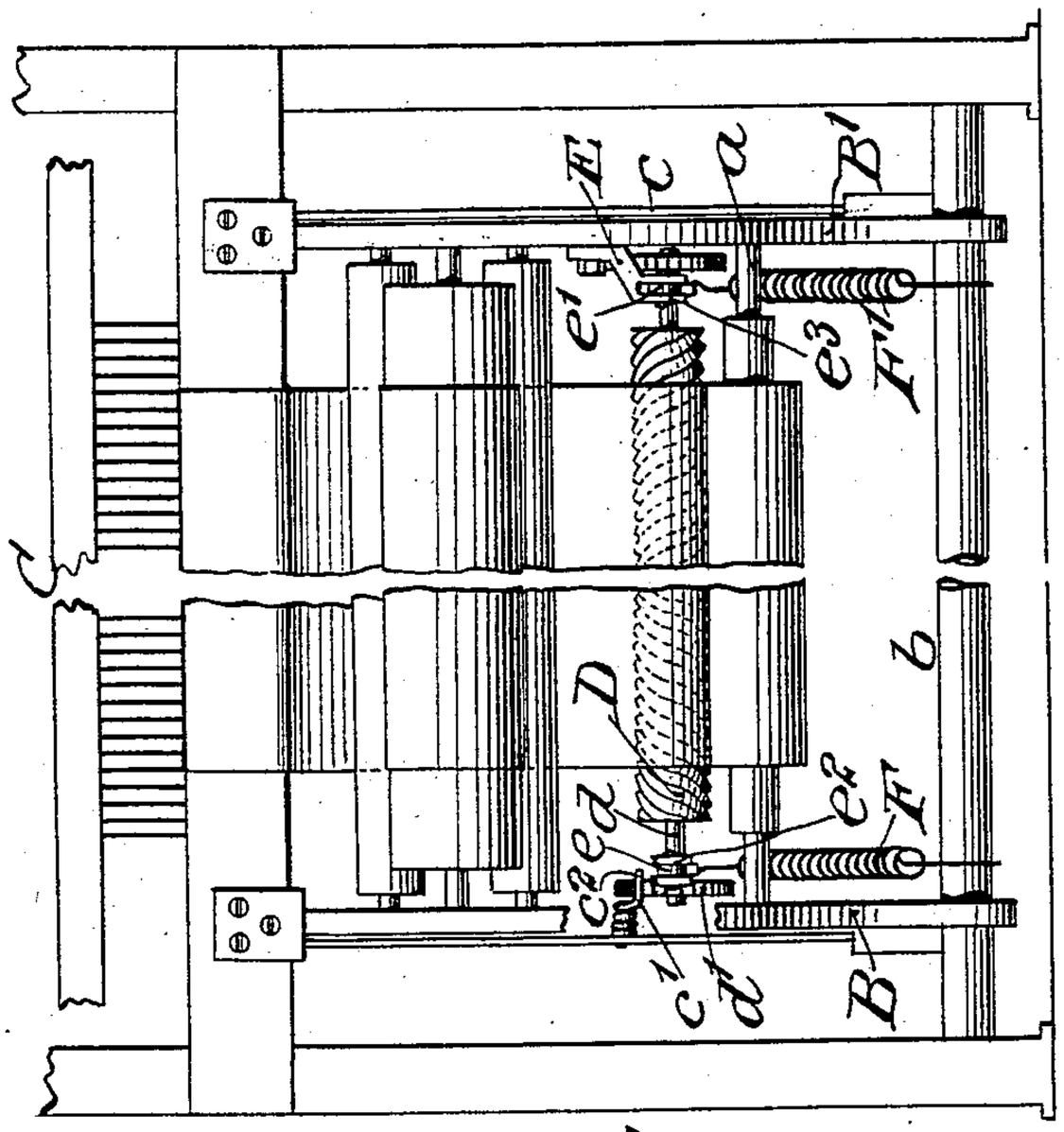
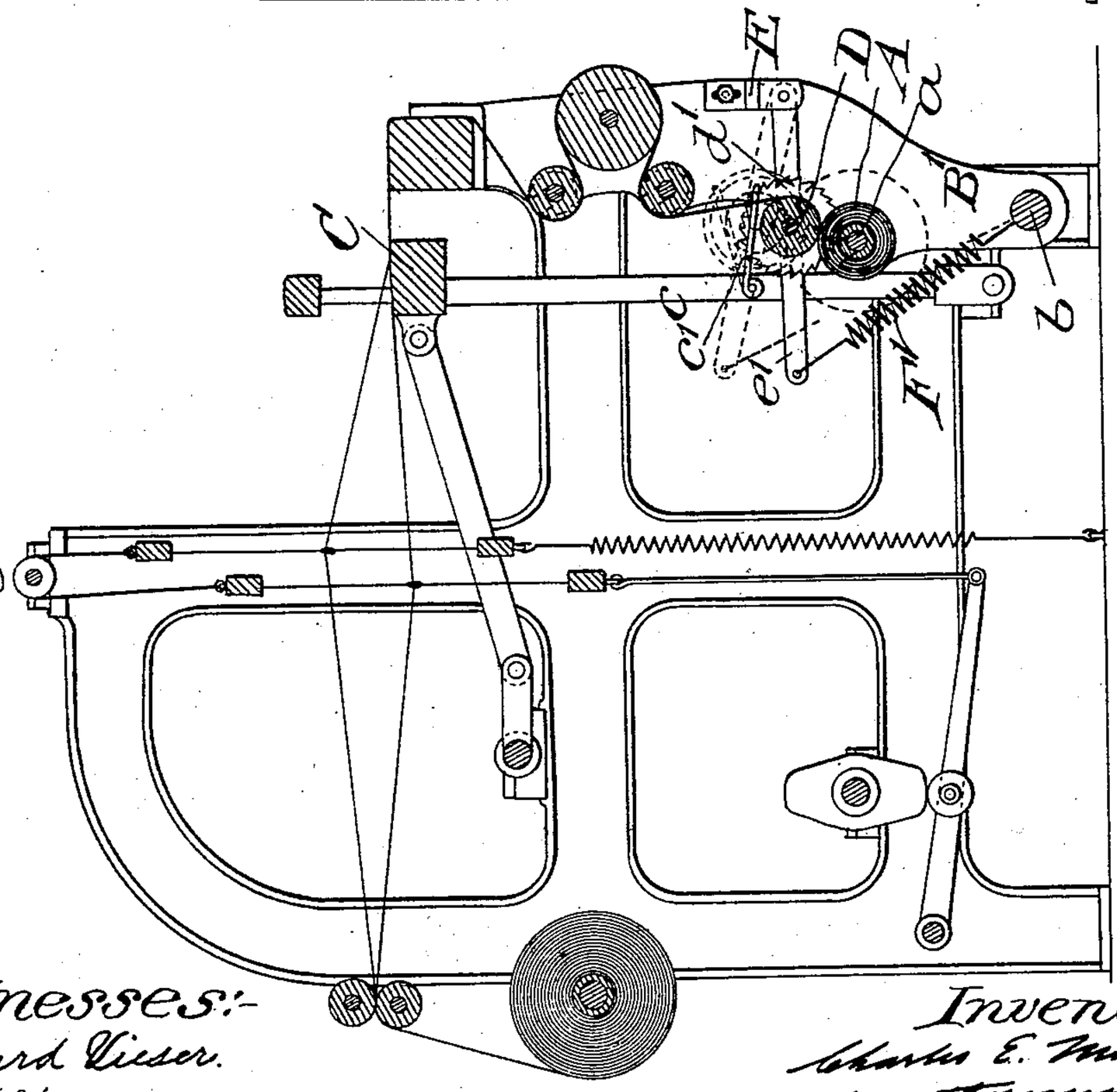


Fig. 2.



Witnesses:-
Edward Kieser.
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Inventor:-
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by attorneys
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No. 751,192. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

CHARLES E. MEDING, OF PATERSON, NEW JERSEY.

CLOTH TAKE-UP AND STRETCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 751,192, dated February 2, 1904.

Application filed August 30, 1899. Serial No. 728,957. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. MEDING, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Cloth Take-Up and Stretching Devices, of which the following is a specification.

My invention relates to an improvement in cloth-stretchers, and relates more particularly to a stretcher adapted for use in connection with looms whereby the woven fabric or cloth may be stretched or spread evenly upon the cloth-winding roll, thus insuring the removal from the cloth or fabric of all folds and wrinkles therein.

The object of my invention is to provide a rotary cloth-stretching roll which is hinged to the frame in such a position as to rest at all times upon the cloth which is wound around the cloth-winding roll, the rotary movement being imparted to the cloth-stretching roll from the slay-beam sword of the loom.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a partial front elevation of a loom embodying my invention; and Fig. 2 is a vertical section from front to rear through the same, showing the position of the stretcher-roll in full lines when a small amount of cloth is wound upon the cloth-winding roll and the position of the stretcher-roll in dotted lines in the position it assumes when a larger amount of cloth is wound upon the cloth-winding roll.

The cloth-winding roll is denoted by A, and its shaft *a* is mounted to rotate in suitable side frames B B′ of the loom. Rotary movement is imparted to the cloth-winding roll in any desired manner.

The slay-beam is denoted by C, and the sword at the right-hand side of the loom, for instance, is denoted by *c*. The slay-beam sword is hinged to the loom-frame, and a reciprocating movement is imparted thereto in the usual manner.

The cloth-stretching roll is denoted by D, and its periphery is provided with spiral grooves leading from about midway the length of the roll outwardly toward its ends. This stretcher-roll is provided with a shaft *d*, which is mounted to rotate in a pair of arms *e e′*, which are hinged at their forward ends, as shown at e^2 e^3, to adjustable brackets E E, secured to the side frames B B′ of the loom. The stretcher-roll is yieldingly held at all times in engagement with the cloth upon the winding-roll A by means of tension-springs F F′, which extend between the arms *e e′* and a cross-beam *b* of the loom-frame.

An intermittent rotary movement is imparted to the stretcher-roll D in a direction to cause the cloth to be spread evenly upon the winding-roll by the following means: A ratchet *d′* is fixed upon one end of the stretcher-roll shaft *d*, and a spring-actuated pawl *c′* is hinged to the slay-beam sword *c* in position to cause the nose c^2 of the pawl to travel along the teeth of the ratchet *d′* when the slay-beam sword is swung forwardly and to engage the said teeth and rotate the ratchet-wheel, and thereby the roll, when the slay-beam sword is rocked rearwardly. This pawl *c′* is so constructed that as the stretcher-roll D is swung upwardly by the increasing amount of cloth wound upon the cloth-roll the connection of the pawl with the ratchet will not be disturbed. By this arrangement the speed of rotation of the stretcher-roll D is much greater than the speed of rotation of the winding-roll. The cloth is caused to engage a considerable portion of the periphery of the stretching-roll as it is led from the breast-beam to the winding-roll. In the present instance about one-quarter of the periphery of the stretching-roll engages the cloth, so that the roll may have an extended contact with the cloth, thus insuring the perfect stretching of the cloth. Furthermore, by mounting the rotary stretcher-roll in a hinge-support and causing it to directly engage the cloth upon the cloth-winding roll I am enabled to insure the winding of the cloth upon the roll smoothly and evenly, the effect of the stretcher-roll being the same when a considerable amount of cloth is wound upon the roll as when a smaller amount is wound thereon.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts without departing from the

spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. In a loom, a rotary cloth-winding roll, a swinging slay-beam, a cloth-stretching roll arranged to directly engage the cloth-winding roll, and means under the control of the swinging movement of the slay-beam for imparting a rotary movement to the cloth-stretching roll in a direction to cause the cloth to spread evenly upon the said cloth-winding roll, substantially as set forth.

2. In a loom, a cloth-winding roll, a swinging slay-beam, a cloth-stretching roll arranged to directly engage the cloth-winding roll, a movable support for the cloth-stretching roll, a ratchet carried by the cloth-stretching roll and a spring-actuated pawl carried by the slay-beam whereby a rotary movement is imparted to the cloth-stretching roll by the swinging movement of the slay-beam, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of August, 1899.

CHARLES E. MEDING.

Witnesses:
GEORGE BARRY, Jr.,
EDWARD VIESER.